L Number	Hits	Search Text	DB	Time stamp
1 Number	1258	((dual adj damascene) or (((multilevel or	USPAT;	2004/02/19 08:00
-	1230	multi adj level) same interconnect\$3) same	US-PGPUB;	
		semiconduct\$4)).ti,ab.	EPO; JPO;	
]	Bonitoonado (17, 71 da, and 1	IBM TDB	
2	612	(((dual adj damascene) or (((multilevel or	USPĀT;	2004/02/19 08:02
		multi adj level) same interconnect\$3) same	US-PGPUB;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	EPO; JPO;	
		stop\$4 same (insulat\$3 or dielectric\$4)	IBM_TDB	
3	588	(((dual adj damascene) or (((multilevel	USPAT;	2004/02/19 08:04
		or multi adj level) same interconnect\$3)	US-PGPUB;	
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	
		adj stop\$4 same (insulat\$3 or	IBM_TDB	
		dielectric\$4)) and (via or hole or void or		
	}	opening or trench\$3 or plug\$3) same		
		(conduct\$4 or metal\$8)		
4	385	(((((dual adj damascene) or (((multilevel	USPAŤ;	2004/02/19 08:05
		or multi adj level) same interconnect\$3)	US-PGPUB;	
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	
		adj stop\$4 same (insulat\$3 or	IBM_TDB	
		dielectric\$4)) and (via or hole or void or		
		opening or trench\$3 or plug\$3) same		
		(conduct\$4 or metal\$8)) and etch\$3 adj stop\$4 same (resist or photoresist)		
_	103	((((((dual adj damascene) or (((multilevel	USPAT;	2004/02/19 08:08
5	193	or multi adj level) same interconnect\$3)	US-PGPUB;	2004,02,13 00.00
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	
		adj stop\$4 same (insulat\$3 or	IBM TDB	
		dielectric\$4)) and (via or hole or void or		
		opening or trench\$3 or plug\$3) same		
		(conduct\$4 or metal\$8)) and etch\$3 adj		
		stop\$4 same (resist or photoresist)) and		1
		(insulat\$3 or dielectric) same ((("USG"		
		or oxide or "O.sub."?) same (high adj		
		density adj plasma or "HDP")) or (oxide or		
		"O.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD" or low adj pressure		
		adj chemical adj vapor adj deposition or		
1 2		low adj pressure adj "CVD" or "LPCVD") or		
		spin adj on adj glass or "SOG" or tetra		•
		adj ethyl adj ortho adj silicate or		
		tetraethyl adj orto adj silicate or		
		tetraethyl adj orthosilicate or tetra adj		
		ethylorthosilicate or		
	<u> </u>	tetraethylorthosilicate or "TEOS")	l	L

6	181	((((((dual adj damascene) or	USPAT;	2004/02/19 08:09
-		(((multilevel or multi adj level) same	US-PGPUB;	
		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
	٥	stop\$4 same (insulat\$3 or dielectric\$4))	_	
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		,
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
	i i	dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj	†	
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		·
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and		
		(insulat\$3 or dielectric) same thick\$4		
7	. 90		USPAT;	2004/02/19 08:11
7	90	(((multilevel or multi adj level) same	US-PGPUB;	2004/02/13 00:11
		interconnect\$3) same	EPO; JPO;	
			IBM TDB	
		<pre>semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or dielectric\$4))</pre>	1011_100	
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or	*	
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or	,	
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")		

8	83	((((((((dual adj damascene) or	USPAT;	2004/02/19 08:12
· ·		(((multilevel or multi adj level) same	US-PGPUB;	
		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))	_	
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
	•	pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		· ·
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same (((nitride or		1
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
	,	or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
	-	or (hafnium or "Hf") adj oxide or "HfO" or		
Ē		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")) and etch\$3 adj stop\$4		
		same thick\$4	1	

9	80	(((((((((dual adj damascene) or	USPAT;	2004/02/19 08:14
9	80	(((multilevel or multi adj level) same	US-PGPUB;	2001/02/19 00:14
		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))	TBM_TBB	
		1		
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
-		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or	-	
		tetraethylorthosilicate or "TEOS")) and		i i
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or		· ·
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "Hf0" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")) and etch\$3 adj stop\$4		
		same thick\$4) and (conduct\$4 or metal\$8)		
		same (aluminum or "Al" or copper or "Cu"		·
		or gold or "Au" or silver or "Ag" or		
		chrome or chromium or "Cr")		
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10	64	((((((((((((((((((((((((((((((((((((((USPAT; US-PGPUB;	2004/02/19 08:17
		(((multilevel or multi adj level) same	EPO; JPO;	
		interconnect\$3) same	IBM TDB	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	1DM_1DD	
		stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		-
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
1		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
1		"PECVD" or low adj pressure adj chemical		
1		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
+		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and		·
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
`		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		· ·
		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		İ
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "Hf0" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")) and etch\$3 adj stop\$4		
		same thick\$4) and (conduct\$4 or metal\$8)		
		same (aluminum or "Al" or copper or "Cu" or gold or "Au" or silver or "Ag" or		
		chrome or chromium or "Cr")) and		
+		(conduct\$4 or metal\$8 or aluminum or "Al"		
		or copper or "Cu" or gold or "Au" or		
1		silver or "Ag" or chrome or chromium or		
1		"Cr") same thick\$4		
11	2819	430/312,314,316-317.ccls.	ÚŠPAT;	2004/02/19 08:20
			US-PGPUB;	
			EPO; JPO;	
			IBM TDB	
12	8322	438/584,622,624,637-638,700,702,723-724.ccl		2004/02/19 08:20
			US-PGPUB;	
			EPO; JPO;	
			IBM TDB	
13	2261	dual adj damascene and (etch\$3 near3	USPAT;	2004/02/19 08:22
		stop\$4 or hardmask\$3 or hard\$4 near3	US-PGPUB;	
-		mask\$3)	EPO; JPO;	
		,	IBM_TDB	
	·	the state of the s		

14	790	(430/312,314,316-317.ccls. or	USPAT;	2004/02/19 08:23
		438/584,622,624,637-638,700,702,723-724.ccl	SUB-PGPUB;	
		and (dual adj damascene and (etch\$3 near3	EPO; JPO;	
		stop\$4 or hardmask\$3 or hard\$4 near3	IBM_TDB	
		mask\$3)) not ((((((((((dual adj		
		damascene) or (((multilevel or multi adj		
		level) same interconnect\$3) same		
		<pre>semiconduct\$4)).ti,ab.) and etch\$3 adj stop\$4 same (insulat\$3 or dielectric\$4))</pre>		
		and (via or hole or void or opening or		
	_	trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or	•	
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or "TEOS")) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Žr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		•
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")) and etch\$3 adj stop\$4		
		same thick\$4) and (conduct\$4 or metal\$8)		
		same (aluminum or "Al" or copper or "Cu"		
	0.000	or gold or "Au" or silver or "Ag" or	HODAR.	2004/02/10 00.20
-	2669	enoone20314h3bmiun7occIsr")) and	USPAT;	2004/02/19 08:20
		(conduct\$4 or metal\$8 or aluminum or "Al" or copper or "Cu" or gold or "Au" or	US-PGPUB; EPO; JPO;	
		silver or "Ag" or chrome or chromium or	IBM TDB	
_	7866	438/58\$am22th24k637-638,700,702,723-724.ccl		2004/02/19 08:20
	,,,,,	100, podymespachydd, 000, 100, 100, 100, 150, 151,001	US-PGPUB;	
			EPO; JPO;	
			IBM TDB	
_	1913	dual adj damascene and (etch\$3 near3	USPAT;	2004/02/19 08:21
		stop\$4 or hardmask\$3 or hard\$4 near3	US-PGPUB;	
		mask\$3)	EPO; JPO;	
			IBM_TDB	
_	10406	430/312,314,316-317.ccls. or	USPAT;	2003/09/13 09:31
		438/584,622,624,637-638,700,702,723-724.ccl	sUS-PGPUB;	
			EPO; JPO;	
			IBM_TDB	0000/00/05
_	723	(430/312,314,316-317.ccls. or	USPAT;	2003/09/13 09:31
		438/584,622,624,637-638,700,702,723-724.ccl		
		and (dual adj damascene and (etch\$3 near3	EPO; JPO;	
	1.00	stop\$4 or hardmask\$3 or hard\$4 near3	IBM_TDB	2004/02/19 07:59
	1139	madkal) adj damascene) or ((multilevel or	USPAT;	2004/02/19 07:55
		multi adj level) same interconnect\$3) same	US-PGPUB; EPO; JPO;	
		semiconduct\$4)).ti,ab.	IBM TDB	
	l		1 100	<u> </u>

_	550	(((dual adj damascene) or (((multilevel or	USPAT;	2004/02/19 08:01
		multi adj level) same interconnect\$3) same	US-PGPUB;	
	1	semiconduct\$4)).ti,ab.) and etch\$3 adj	EPO; JPO;	
	1	stop\$4 same (insulat\$3 or dielectric\$4)	IBM_TDB	0004/00/10 00 00
-	527	((((dual adj damascene) or (((multilevel	USPAT;	2004/02/19 08:03
		or multi adj level) same interconnect\$3)	US-PGPUB;	
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	
		adj stop\$4 same (insulat\$3 or	IBM_TDB	
		dielectric\$4)) and (via or hole or void or		-
		opening or trench\$3 or plug\$3) same		
		(conduct\$4 or metal\$8)	TTO TO TO	2004/02/10 00:04
-	346	(((((dual adj damascene) or (((multilevel	USPAT;	2004/02/19 08:04
		or multi adj level) same interconnect\$3)	US-PGPUB;	
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	
		adj stop\$4 same (insulat\$3 or	IBM_TDB	
		dielectric\$4)) and (via or hole or void or		
		opening or trench\$3 or plug\$3) same		
		(conduct\$4 or metal\$8)) and etch\$3 adj		
		stop\$4 same (resist or photoresist)		0004/00/10 00 05
-	179		USPAT;	2004/02/19 08:05
		or multi adj level) same interconnect\$3)	US-PGPUB;	
		same semiconduct\$4)).ti,ab.) and etch\$3	EPO; JPO;	
		adj stop\$4 same (insulat\$3 or	IBM_TDB	
		dielectric\$4)) and (via or hole or void or		
		opening or trench\$3 or plug\$3) same		
		(conduct\$4 or metal\$8)) and etch\$3 adj		
		stop\$4 same (resist or photoresist)) and		
		(insulat\$3 or dielectric) same ((("USG"		
		or oxide or "O.sub."?) same (high adj		
		density adj plasma or "HDP")) or (oxide or		· ·
		"O.sub."?) same (plasma adj enhanced adj	ē	
ĺ		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD" or low adj pressure		
		adj chemical adj vapor adj deposition or		
		low adj pressure adj "CVD" or "LPCVD") or		
		spin adj on adj glass or "SOG" or tetra		
	-	adj ethyl adj ortho adj silicate or		
		tetraethyl adj orto adj silicate or		
		tetraethyl adj orthosilicate or tetra adj		
		ethylorthosilicate or		ļ
		tetraethylorthosilicate or "TEOS")	II G D I H	2004/02/10 00:00
_	168	(((((((dual adj damascene) or	USPAT;	2004/02/19 08:08
		(((multilevel or multi adj level) same	US-PGPUB;	
-		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM_TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		· ·
		same (plasma adj enhanced adj chemical adj		-
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and	Í	
		(insulat\$3 or dielectric) same thick\$4		
1	1	(THOUTACAD OF OTELECCTIC) same curckage		L

_	84	(((((((dual adj damascene) or	USPAT;	2004/02/19 08:09
		(((multilevel or multi adj level) same	US-PGPUB;	
		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM_TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and		•
		(insulat\$3 or dielectric) same thick\$4)		
	·	and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")	1.	

			HCDAT.	2004/02/19 08:12
-	77	((((((((dual adj damascene) or	USPAT; US-PGPUB;	2004/02/19 08:12
	İ	(((multilevel or multi adj level) same	EPO; JPO;	
		interconnect\$3) same		
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM_TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
ĺ		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and		
		(insulat\$3 or dielectric) same thick\$4)		
	-	and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		·
		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		-
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		·
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")) and etch\$3 adj stop\$4		
		same thick\$4		
L		Same Chickag	L	<u></u>

	75	(((((((((dual adj damascene) or	USPAT;	2004/02/19 08:14
		(((multilevel or multi adj level) same	US-PGPUB;	
		interconnect\$3) same	EPO; JPO;	
		semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
		stop\$4 same (insulat\$3 or dielectric\$4))	_	
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same		
		(resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj	,	
		plasma or "HDP")) or (oxide or "O.sub."?)		1
		same (plasma adj enhanced adj chemical adj		
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		.
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj		
		on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj		
		chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
	`	adj "ECVD" or "PECVD")) or (silicon or		1
	1	"Si") adj oxynitride or siliconoxynitride		
	'	or silicon adj "ON" or "SiON" or (tantalum		
-		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2"		
		or (hafnium or "Hf") adj oxide or "HfO" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")) and etch\$3 adj stop\$4		
	•	same thick\$4) and (conduct\$4 or metal\$8)		
-		same (aluminum or "Al" or copper or "Cu"		,
		or gold or "Au" or silver or "Ag" or		
		chrome or chromiumn or "Cr")		
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		,	
- 59	((((((((((dual adj damascene) or	USPAT;	2004/02/19 08:17
·	(((multilevel or multi adj level) same	US-PGPUB;	
	interconnect\$3) same	EPO; JPO;	1
	semiconduct\$4)).ti,ab.) and etch\$3 adj	IBM TDB	
	stop\$4 same (insulat\$3 or dielectric\$4))	_	•
	and (via or hole or void or opening or		
	trench\$3 or plug\$3) same (conduct\$4 or		
	metal\$8)) and etch\$3 adj stop\$4 same		
	(resist or photoresist)) and (insulat\$3 or		
	dielectric) same ((("USG" or oxide or		
	"O.sub."?) same (high adj density adj		
.	plasma or "HDP")) or (oxide or "O.sub."?)		
	same (plasma adj enhanced adj chemical adj		
	vapor adj deposition or plasma adj		
1	enhanced adj "CVD" or plasma adj "ECVD" or		
1	"PECVD" or low adj pressure adj chemical		
:	adj vapor adj deposition or low adj		
	pressure adj "CVD" or "LPCVD") or spin adj		
	on adj glass or "SOG" or tetra adj ethyl		-
	adj ortho adj silicate or tetraethyl adj		
	orto adj silicate or tetraethyl adj		
	orthosilicate or tetra adj		
·	ethylorthosilicate or		
	tetraethylorthosilicate or "TEOS")) and		
	(insulat\$3 or dielectric) same thick\$4)		
	and etch\$3 adj stop\$4 same (((nitride or		
	"N.sub."?) same (plasma adj enhanced adj		
	chemical adj vapor adj deposition or		
	plasma adj enhanced adj "CVD" or plasma		-
	adj "ECVD" or "PECVD")) or (silicon or		
	"Si") adj oxynitride or siliconoxynitride		
	or silicon adj "ON" or "SiON" or (tantalum		
	or "Ta") adj oxide or "Ta.sub.2" adj	, i	
	"O.sub.5" or (zinc or "Zn") adj oxide or		
	"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
	or "Zr") adj oxide or "Zr" adj "O.sub.2"		
[or (hafnium or "Hf") adj oxide or "Hf0" or		
	(aluminum or "Al") adj oxide or "Al.sub.2"		
	adj "O.sub.3")) and etch\$3 adj stop\$4		
.	adj U.Sub.5)) and econys adj stopp4		
· [same thick\$4) and (conduct\$4 or metal\$8)		
	same (aluminum or "Al" or copper or "Cu"		
	or gold or "Au" or silver or "Ag" or		
	chrome or chromiumn or "Cr")) and		
	(conduct\$4 or metal\$8 or aluminum or "Al"		
	or copper or "Cu" or gold or "Au" or		
	silver or "Ag" or chrome or chromiumn or		
	"Cr") same thick\$4		

	CO1	(//20/212 21/ 216 217 cclc or	USPAT;	2004/02/19 08:19
-	681	((430/312,314,316-317.ccls. or 438/584,622,624,637-638,700,702,723-724.ccl		2004/02/17 00.19
		and (dual adj damascene and (etch\$3 near3	EPO; JPO;	
		stop\$4 or hardmask\$3 or hard\$4 near3	IBM TDB	
		mask\$3))) not (((((((((dual adj	_	
		damascene) or (((multilevel or multi adj		
		level) same interconnect\$3) same		ľ
		semiconduct\$4)).ti,ab.) and etch\$3 adj		
		stop\$4 same (insulat\$3 or dielectric\$4))		
		and (via or hole or void or opening or		
		trench\$3 or plug\$3) same (conduct\$4 or		
		metal\$8)) and etch\$3 adj stop\$4 same (resist or photoresist)) and (insulat\$3 or		
		dielectric) same ((("USG" or oxide or		
		"O.sub."?) same (high adj density adj		
		plasma or "HDP")) or (oxide or "O.sub."?)		
		same (plasma adj enhanced adj chemical adj		-
		vapor adj deposition or plasma adj		
		enhanced adj "CVD" or plasma adj "ECVD" or		
		"PECVD" or low adj pressure adj chemical		
		adj vapor adj deposition or low adj		
		pressure adj "CVD" or "LPCVD") or spin adj on adj glass or "SOG" or tetra adj ethyl		
		adj ortho adj silicate or tetraethyl adj		. 1
		orto adj silicate or tetraethyl adj		
		orthosilicate or tetra adj		
		ethylorthosilicate or		
		tetraethylorthosilicate or "TEOS")) and		
		(insulat\$3 or dielectric) same thick\$4)		
		and etch\$3 adj stop\$4 same (((nitride or		
		"N.sub."?) same (plasma adj enhanced adj chemical adj vapor adj deposition or		
		plasma adj enhanced adj "CVD" or plasma		
		adj "ECVD" or "PECVD")) or (silicon or		
		"Si") adj oxynitride or siliconoxynitride		
		or silicon adj "ON" or "SiON" or (tantalum		1
		or "Ta") adj oxide or "Ta.sub.2" adj		
		"O.sub.5" or (zinc or "Zn") adj oxide or		
		"Zn" adj "O.sub."2 or "ZnO" or (zirconium		
		or "Zr") adj oxide or "Zr" adj "O.sub.2" or (hafnium or "Hf") adj oxide or "HfO" or		
		(aluminum or "Al") adj oxide or "Al.sub.2"		
		adj "O.sub.3")) and etch\$3 adj stop\$4		
		same thick\$4) and (conduct\$4 or metal\$8)		
		same (aluminum or "Al" or copper or "Cu"		
		or gold or "Au" or silver or "Ag" or		0000/00/15
_	1	で的60か2544、Phromiumn or "Cr")) and	USPAT;	2003/09/15 18:02
	٠.	(conduct\$4 or metal\$8 or aluminum or "Al" ይቻ685ቃዎልያ.መል."Cu" or gold or "Au" or	US-PGPUB USPAT;	2003/09/15 18:03
_	1	silver or "Aq" or chrome or chromiumn or	US-PGPUB	2003/03/13 10.03
_	1	"6686354MePNhick\$4)	USPAT;	2003/09/15 18:03
	l		US-PGPUB	
	1	"5723387".PN.	USPAT;	2003/09/15 18:07
			US-PGPUB	
-	1	"5739579".PN.	USPAT;	2003/09/15 18:07
		HEZE 20 (21) DN	US-PGPUB	2002/00/15 10:00
	1	"5753967".PN.	USPAT; US-PGPUB	2003/09/15 18:08
	1	"5935762".PN.	USPAT;	2003/09/15 18:08
		3333702 .11.	US-PGPUB	
_	1	"5989997".PN.	USPAT;	2003/09/15 18:09
			US-PGPUB	
-	1	"6001414".PN.	USPAT;	2003/09/15 18:09
		W.CO.04.70.0W. PNV	US-PGPUB	2002/00/15 10:10
_	1	"6001733".PN.	USPAT;	2003/09/15 18:10
	1	"6025226" DN	US-PGPUB USPAT;	2003/09/15 18:11
	1	"6025226".PN.	US-PGPUB	2003/03/13 10:11
_	1	"6027994".PN.	USPAT;	2003/09/15 18:11
			US-PGPUB	
I	L	I The second sec		

_	1 1	"6028362".PN.	USPAT;	2003/09/15 18:12
	_		US-PGPUB	
_	1	"6033977".PN.	USPAT;	2003/09/15 18:12
_	1	003377 12111	US-PGPUB	